

METHOD FOR EXTENDING TIME BETWEEN CHAMBER CLEANING PROCESSES

ABSTRACT OF THE DISCLOSURE

A method for extending time between chamber cleaning processes in a process chamber of a processing system. A particle-reducing film is formed on a chamber component in the process chamber to reduce particle formation in the process chamber during substrate processing, at least one substrate is introduced into the process chamber, a manufacturing process is performed in the process chamber, and the at least one substrate is removed from the process chamber. The particle-reducing film may be deposited on a clean chamber component or on a material deposit formed on a chamber component. Alternatively, the particle-reducing film may be formed by chemically modifying at least a portion of a material deposit on a chamber component. The particle-reducing film may be formed after each manufacturing process or at selected intervals after multiple manufacturing processes.